DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028353
Date Inspected: 08-Sep-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 2130
Location: jobsite

CWI Name: Scott Kortum

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:
Quality Assurance inspector (QA) Matthew Daggett was at the American Bridge/Fluor (ABF) job site at the San Francisco/Oakland Bay Bridge in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. Weld Repair 13W-PP123-BF-3; Y Location: 210mm

2. Critical Weld Repair 13W-PP125.5-W2.8-BF-2; Y Location: 380mm (Face A)

3. Critical Weld Repair 13W-PP125.5-W2.8-BF-2; Y Location: 1500mm (Face B)

Weld Repairs 13W-PP123-BF-3; Y Location 210mm

This QAI randomly observed the welder Jimmy Zen grinding to a bright clean metal condition an excavation at the following location on Floor Beam Bottom Flange Splice 13W-PP123-BF-3:

Y=210mm, D=13mm, L=30mm, W=20mm

Prior to welding Quality Control Technician Scott Kortum performed Visual and Magnetic Particle Testing on the above excavations. This Quality Assurance Inspector verified the results of the test by doing duplicate testing to the excavations. No indications were noted.

The welder spent part of the shift depositing the root passes and fill passes with approximately 40% being completed at the end of the shift. QC inspector Kortum was noted to be present in order to monitor the progress and ensure the welding was within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D15-1001 Rev 0 and supporting Procedure Qualification Records (PQR). Prior to and during the welding at this location the QC inspector observed the preheat temperature using a Raytek non-contact Thermometer, was sufficient and compliant to the above-mentioned WPS. Using a Tempil Stick, (temperature indicating crayon) the preheat was then verified by this QA inspector to be greater than 150F. The parameters, using a Fluke brand Tong style meter, was verified to be 135 amps.

Weld Repairs 13W-PP125.5-W2.8-BF-2; Y Location 380mm (Face A)

This QA inspector observed critical weld repair being performed by ABF welding personnel Jose Torres, without an Engineers approval on Floor Beam Web Splice 13W-PP125.5-W2.8-BF-2, at the following location:

Y= 380mm, D=9mm, W=25mm, L=100mm (Face A)

This QA Inspector observed Mr. Torres preheating to a QC recorded, QA verified temperature of 250F prior to using the Carbon Arc Gouging process to remove defects at the above-mentioned locations on the Splice. The locations and depth of the defects had been marked on the steel by the Ultrasonic Technician at the conclusion of his testing. At the end of gouging operations Mr. Torres ground the excavations to a bright clean metal condition in preparation of Visual and Magnetic Particle Testing.

Prior to welding Quality Control Technician Scott Kortum performed Visual and Magnetic Particle Testing on the above excavations. This Quality Assurance Inspector verified the results of the test by doing duplicate testing to the excavations. No indications were noted.

The welder spent a fraction of the shift depositing the root passes and fill passes with approximately 100% being completed at the end of the shift. QC inspector Scott Kortum was noted to be present in order to monitor the progress and ensure the welding was within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D15-1004R (Rev 0) and supporting Procedure Qualification Records (PQR). Prior to initiating the welding at this location the QC inspector observed the preheat temperature and post heat temperature using a Raytek non-contact Thermometer, was sufficient and compliant to the above-mentioned WPS. Using a Tempil Stick, (temperature indicating crayon) the preheat, and post heat temperature was then verified by this QA inspector to be greater than 350Fand 450F respectively. The parameters, using a Fluke brand Tong style meter, was verified to be 146 amps.

Weld Repairs 13W-PP125.5-W2.8-BF-2; Y Location 1500mm (Face B)

This QA inspector observed critical weld repair being performed (pick up repairs being performed after QC Visual Inspection) by ABF welding personnel Jimmy Zen, without an Engineers approval on Floor Beam Web Splice 13W-PP125.5-W2.8-BF-2, at the following location:

Y= 1500mm, D=7mm, W=15mm, L=1100mm (Face B)

This QA Inspector observed Mr. Zen preheating to a QC recorded, QA verified temperature of 250F prior to using the Carbon Arc Gouging process to remove defects at the above-mentioned locations on the Splice. The locations and depth of the defects had been marked on the steel by the Ultrasonic Technician at the conclusion of his testing. At the end of gouging operations Mr. Zen ground the excavations to a bright clean metal condition in preparation of Visual and Magnetic Particle Testing.

Prior to welding Quality Control Technician Scott Kortum performed Visual and Magnetic Particle Testing on the above excavations. This Quality Assurance Inspector verified the results of the test by doing duplicate testing to the excavations. No indications were noted.

The welder spent a fraction of the shift depositing the root passes and fill passes with approximately 100% being completed at the end of the shift. QC inspector Scott Kortum was noted to be present in order to monitor the progress and ensure the welding was within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D15-1004R (Rev 0) and supporting Procedure Qualification Records (PQR). Prior to initiating the welding at this location the QC inspector observed the preheat temperature and post heat temperature using a Raytek non-contact Thermometer, was sufficient and compliant to the above-mentioned WPS. Using a Tempil Stick, (temperature indicating crayon) the preheat, and post heat temperature was then verified by this QA inspector to be greater than 350Fand 450F respectively. The parameters, using a Fluke brand Tong style meter, were verified to be 146 amps.

Summary of Conversations:
There were general conversations with Quality Control Inspector Scott Kortum, at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift. All observations were relayed to Danny Reyes and Bill Levell.

Comments
This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas 916-764-6027, who represents the Office of Structural Materials for

your project.

Inspected By:	Daggett,Matt	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer